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| 10/527,137   | 03/08/2005  | Tatsuya Deguchi      | 450100-04774        | 9407             |
| 7590 11/12/2008  |             |                      |                     |                  |
| William S Frommer<br>Frommer Lawrence & Haug<br>745 Fifth Avenue<br>New York, NY 10151 |             |                      |                     |                  |
| EXAMINER   |             |                      |                     |                  |
| HSU, AMY R   |             |                      |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/527,137

**Applicant(s)**

DEGUCHI ET AL.

**Examiner**

AMY HSU

**Art Unit**

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/21/2008 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaulding et al. (US 7289663) in view of Choi (US 2003/0206242).

Regarding Claim 1, Spaulding teaches a digital still camera comprising: a first converting circuit that receives image data of an image subjected to an automatic white balance correction (*Fig. 3 reference number 140*) and converts the image data according to two scene-reference color space formats (*Fig. 6, reference number 604 in one conversion according to a scene rgb format, and reference number 610 is another conversion according to an extended gamut, which is a different format*) ; a temporary memory for storing image data of an image for which tone correction is to be performed in the one of the plurality of scene-reference color space formats (*Fig. 2 reference number 318*). Official notice is taken that it is well known in the art for a digital camera to have a removable recording medium storing both the converted image data and the unconverted image data. It is well known and often standard to record the raw or unconverted image data along with converted image data for the user to be able to load the unconverted image to an external processor such as a computer to do more customized processing. Spaulding further teaches a tone correction circuit (*Fig. 3 reference number 150*), wherein the two scene-reference color space formats comprise a first scene-reference color space format and a second scene-reference color space format having linear image data and an extended color space of the first scene-reference color space format (*Col 7 Lines 55-58 teaches the second color space uses linear values and Fig. 6 reference number 610 teaches the second color space is an extended range of rgb with respect to reference number 604 scene rgb*), wherein the image data is read out from the temporary memory or the recording medium to perform the tone correction, and the image data resulting from the tone correction is recorded in

the recording medium (*Col 4 Line 67 through Col 5 Line10*). However, Spaulding does not teach the image data is converted by one of the two color space formats; rather Spaulding teaches both in the method of Fig. 6. With reference to Fig. 6, it is well known that a standard digital camera will perform up to reference number 604 which is a standard conversion of original color signal. Therefore one of ordinary skill in the art would recognize the process could stop there and realize an additional option of continuing through the method of Fig. 6. Choi teaches converting a video signal according to one of several color space formats which is seen in Fig. 5 and Fig. 3 reference number 204.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Spaulding with that of Choi to realize two separate conversions by different color space formats in order to optimize the image data by certain parameters according to the output the user prefers. It would be obvious to provide the user with more options in this manner.

Regarding Claim 2, Spaulding teaches the digital still camera according to claim 1, further comprising: a white-balance fine tuning circuit for fine-tuning a white balance of the image data, wherein the image data read out from the temporary memory or the recording medium is supplied to the white-balance fine tuning circuit to fine-tune the white balance, and the image data resulting from the fine tuning is recorded in the recording medium. Fig. 3 reference number 140 is a white balance circuit which fine

tunes the white balance by correcting the red, green, and blue signal levels using appropriate white balance correction values as taught in Col 7 Lines 1-22. The data that has been white balance adjusted is eventually recorded in the recording medium, reference number 330.

Regarding Claim 3, Spaulding further teaches a display, wherein the image data output from the white-balance fine tuning circuit is supplied to the display to display the result of the fine tuning in the white-balance fine tuning circuit in the display (*Fig. 2 reference number 332 is a display which displays the image outputted from the image processor which contains the white balance adjustment circuit*).

Claims 11-12 are rejected similarly to Claims 1-2.

5. Claims 4-10, 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaulding et al. (US 7289663) in view of Choi (US 2003/0206242), further in view of Takemoto (US 7081918).

Regarding Claim 4, Spaulding in view of Choi teaches the digital still camera according to claim 1, but are silent on details of the tone correction circuit. One of ordinary skill in the art would look to prior art for what is well known about tone correction.

Takemoto teaches a tone correction circuit (*Fig. 1 reference number 8*) with a plurality of selectable tone correction characteristics and corrects the readout image data with respect to one of the tone correction characteristics (*Col 10 Lines 50-59 teaches selectable tone types, or characteristics, for specific conditions such as for cloudy weather, and accordingly tone correction is performed based on the selection of tone type*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Spaulding in view of Choi to add the well-known features of tone correction in order to optimize image processing and enhancement for various different common shooting conditions.

Regarding Claim 5, Spaulding in view of Choi further in view of Takemoto teach the digital still camera according to claim 4, Takemoto further teaches an operation unit of a GUI (*Fig. 1 reference number 5*) for selecting one of the tone correction characteristics (*Col 10 Lines 50-53, the tone type is input by the input means, 5*), wherein the operation state in the operation unit is displayed in the display (*Col 11 Lines 3-6 teaches the operation state is displayed. The operation state is the correction of the tone curves input*).

It would have been obvious to modify the teaching of Spaulding in view of Choi for the same reason as Claim 4.

Regarding Claim 6, Spaulding in view of Choi further in view of Takemoto teach the digital still camera according to claim 4, Takemoto further teaches a statistical analysis is performed for a luminance component of the readout image data (*Fig. 2 which is produced by Fig. 1 reference number 8-a*) , and wherein one of the tone correction characteristics is selected according to the analysis result to perform the tone correction (*Col 12 Lines 12-26*). It would have been obvious to modify the teaching of Spaulding in view of Choi with that of Takemoto for the same reason as Claim 4.

Regarding Claim 7, Spaulding in view of Choi further in view of Takemoto teach the digital still camera according to claim 4, and Takemoto further teaches the apparatus can receive a selected tone type via the input (*Col 10 Lines 50-59*) and also teaches examples of the tone types such as for backlight, for flash photographing, for cloudy weather. It would have been obvious to one of ordinary skill in the art at the time of the invention that a characteristic in which an image has high average luminance, high contrast, and high saturation, could be one of the tone types, or tone characteristics, in addition to the ones taught by Takemoto. Takemoto teaches the concept of selecting tone types with different characteristics. For example cloudy weather and flash photographing would involve different levels of saturation, contrast, and luminance. Adding additional variations of these combinations does not change the inventive concept taught by Takemoto. It would have been obvious to modify the teaching of Spaulding in view of Choi with that of Takemoto for the same reason as Claim 4.



Regarding Claim 8, Spaulding in view of Choi further in view of Takemoto teach the digital still camera according to claim 4, and Takemoto further teaches a characteristic in which an image output to a display or a printer (*Fig. 1 reference number 13 and 14*) has high average luminance and high contrast, as one of the tone correction characteristics (*as addressed with Claim 7*).

Claim 9 claims the digital still camera according to claim 4, wherein the digital still camera has a characteristic in which the tone of a shadow or a highlight of the image is preferentially corrected, as one of the tone correction characteristics. As stated in the paragraph addressing Claim 7, Takemoto teaches the concept of different tone types, which affect tone correction, adding different variations does not change the inventive concept. Claim 9 is rejected similarly to Claim 7.

Regarding Claim 10, Spaulding in view of Choi teach the digital still camera according to claim 1, but do not teach a combination of an S-shaped function and an inverted S-shaped function is used as a tone correction characteristic. One of ordinary skill in the art would look to prior art for what is well known about tone correction.

Takemoto further a combination of an S-shaped function and an inverted S-shaped function is used as a tone correction characteristic (*Col 12 Lines 23 and Fig. 2, quadrant I and III show the S-shaped function and quadrant IV shows the inverted S shaped function*).

It would have been obvious to modify the teaching of Spaulding in view of Choi with that of Takemoto for the same reason as Claim 4.

Claims 13-19 are rejected similarly to claims 4-10.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMY HSU whose telephone number is (571)270-3012. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on 571-272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amy Hsu  
Examiner

Art Unit: 2622

Art Unit 2622

ARH 11/3/08

/Lin Ye/

Supervisory Patent Examiner, Art Unit 2622